

REMARKS

By this Amendment, claims 4, 14 and 15 has been amended merely to clarify what is being claimed and without any intention of narrowing the scope of the claims. Support for the instant amendments may be found throughout Applicant's originally filed specification. Applicant submits that no new matter has been introduced. Accordingly, claims 4-7, 9-12 and 14-17 remain pending. Reconsideration and the timely allowance of the pending claims, in view of the following remarks, are respectfully requested.

Rejections Under 35 U.S.C. § 103

Claims 4-6, 9-12, 16 and 17 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 5,818,942 to Freadman ("Freadman '942"). Applicant traverses this rejection for at least the following reasons.

Applicant submits that the cited portions of Freadman '942 do not disclose, teach or render obvious an electronic apparatus comprising a casing defining a closed space and containing electronic components in the space; and a pair of speaker units, left and right, located in the casing, each of the speaker units including a cabinet, a speaker arranged in the cabinet and exposed to the outside of the cabinet, and a port which is defined in the cabinet to open the outside of the cabinet and through which a sound emitted from the backside of the speaker into the cabinet is radiated outward from the cabinet and into the space of the casing, the cabinet of each speaker unit having a top face in contact with an inner surface of an outside wall of the casing and a protrusion which protrudes from the top face and passes through an opening defined in the outside wall of the casing, the speaker being located in the cabinet so as to be exposed to the outside of the casing through the opening of the casing and the protrusion, and the casing having openings through which sounds emitted from the ports of the speaker units into the space of the casing and synthesized together in the space of the casing are radiated to the outside of the casing, as recited in claim 4.

In other words, according to the electronic apparatus as claimed, the casing defines a closed space and contains electronic components in the space. The speaker units are located in the space of the casing. The cabinet of each speaker unit has a top face in contact with an inner surface of an outside wall of the casing and a protrusion which protrudes from the top face and

passes through an opening defined in the outside wall of the casing. The speaker of each unit is exposed outward from the casing through the protrusion of the cabinet and the opening defined in the outside wall of the casing. The ports in the cabinet open into the casing without being exposed in the outer surface of the casing. In designing the speaker units, therefore, the ports can be arranged freely, so that the degree of freedom of design can be heightened considerably. Further, the outer surface of the casing need not be formed partially of those parts of the cabinets in which the ports are defined, so that restrictions on the shape and the like in the design of the cabinets can be reduced. Thus, cabinets that are adapted for portable computers can be developed easily in a short period of time.

When the speaker units are worked, high-, medium-, and low-pitched sounds that are emitted from the front side of the speakers radiated directly outward from the casing. On the other hand, low-pitched sounds that are emitted from the backside of the speakers into the cabinets are radiated from the ports into the space of the casing in phase with the sounds emitted from the front of the speakers. Since low-pitched sounds are low in directivity, the low-pitched sounds that are emitted from the speaker units into the space of the casing are synthesized together in the casing. The resultant sound vibrates the whole casing and is partially radiated to the outside of the casing through openings or various gaps. Thus, the bass range can be enhanced to reproduce rich low-pitched sounds or voices. [See, e.g., Applicant's Specification; page 10, lines 4-20].

In contrast, the sound source disclosed in Freadman '942 does not have the above-recited features of claim 4. More specifically, the cited portions of Freadman '942 do not disclose or teach at least the features of "a *casing* defining a *closed space* and containing *electronic components in the space*," as recited in claim 4. Figure 1 of Freadman '942 shows Prior Art as described in column 1 and not the invention of Freadman '942. As described in column 2, lines 18-20 of Freadman '942, an enclosed unit 20 is formed at the top rear edge of a keyboard shell 12 and *not in a closed space of a casing*, which contains *electronic components*. In the configuration shown in Figure 3 of Freadman '942, too, it is apparent that the enclosed unit 20 is provided *outside* the device casing.

Moreover, the cited portions of Freadman '942 do not disclose or render obvious at least the feature "each of the speaker units including...a *port which is defined in the cabinet to open the outside of the cabinet* and through which a sound emitted from the backside of the speaker

into the cabinet is radiated outward from the cabinet and into the space of the casing,” as recited in claim 4. The Office Action identifies Freadman’s ‘942 end of a hollow tube 32 as the recited port and Freadman’s ‘942 speaker cavity 22 as the recited cabinet. However, Applicant respectfully submits that it is unclear whether the port (end of 32) indicated in the Office Action corresponds to one end 26a of the hollow tube 32 or the other end 28a thereof. Whichever end (26a or 28a) of the hollow tube 32 the Office Action is relying on, the port 32 of Freadman ‘942 is *not opened in the space of the casing containing electronic components*.

Accordingly, Applicant submits that the cited portions of Freadman ‘942 fail to disclose or render obvious each and every feature of independent claim 4. Claims 5, 6, 9-12, 16 and 17 depend respectively from claim 4 and therefore, are patentable for at least the same reasons provided above related to claim 4 and for the additional features recited therein.

Claims 7, 14 and 15 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Freadman ‘942 in view of U.S. Patent No. 5,808,708 to Freadman (“Freadman ‘708”). Applicant traverses this rejection for at least the following reasons.

Even assuming *arguendo* that Freadman ‘942 and Freadman ‘708 are properly combinable (which Applicant does not concede), Applicant respectfully submits that the cited portions of Freadman ‘942 and Freadman ‘708, taken together or individually, do not disclose, teach or render obvious an electronic apparatus comprising a casing defining a closed space and containing electronic components in the space; and a pair of speaker units, left and right, located in the space of the casing, each of the speaker units including a cabinet, a speaker arranged in the cabinet and exposed to the outside of the cabinet, and a port which is defined in the cabinet to open the outside of the cabinet and through which a sound emitted from the backside of the speaker into the cabinet is radiated outward from the cabinet and into the space of the casing, the speaker having a portion exposed to the outside of the casing through an opening defined in an outside wall of the casing, and the casing having openings through which sounds emitted from the ports of the speaker units into the space of the casing and synthesized together in the space of the casing are radiated to the outside of the casing, the casing being a laptop computer, and the speaker units being positioned at left and right corners of a top wall of the laptop computer, respectively, and the speakers being oriented towards the top wall of the laptop computer and the ports being oriented toward a front wall of the laptop computer, as recited in claim 14.

Even assuming *arguendo* that Freadman '942 and Freadman '708 are properly combinable (which Applicant does not concede), Applicant respectfully submits that the cited portions of Freadman '942 and Freadman '708, taken together or individually, do not disclose, teach or render obvious an electronic apparatus comprising a casing defining a closed space and containing electronic components in the space; and a pair of speaker units, left and right, located in the casing, each of the speaker units including a cabinet, a speaker arranged in the cabinet and exposed to the outside of the cabinet, and a port which is defined in the cabinet to open the outside of the cabinet and through which a sound emitted from the backside of the speaker into the cabinet is radiated outward from the cabinet and into the space of the casing, the speaker having a portion exposed to the outside of the casing through an opening defined in an outside wall of the casing, and the casing having openings through which sounds emitted from the ports of the speaker units into the space of the casing and synthesized together in the space of the casing are radiated to the outside of the casing, the casing being a laptop computer, and the speaker units being positioned at left and right corners of a top wall of the laptop computer, respectively, and the speakers being oriented towards the top wall of the laptop computer and the ports being oriented toward opposite sidewalls of the laptop computer, such that the respective ports are opposed to each other, as recited in claim 15.

Moreover, even assuming *arguendo* that Freadman '708 may be relied upon in an obviousness rejection (which Applicant does not concede), Freadman '708 fails to teach or render obvious at least the feature of "a casing defining a closed space and containing electronic components in the space; and a pair of speaker units, left and right, located in the space of the casing, each of the speaker units including a cabinet, a speaker arranged in the cabinet and exposed to the outside of the cabinet, and a port which is defined in the cabinet to open the outside of the cabinet and through which a sound emitted from the backside of the speaker into the cabinet is radiated outward from the cabinet and into the space of the casing," as recited in claims 14 and 15. Indeed, it appears that Freadman '708 was merely relied upon by the Office Action to show "that a laptop computer that could uses better design built-in speaker housing for generating better sound quality for multiple media application." [See, e.g., Office Action; pg. 6].

Claim 7 depends from and claims additional features from claim 4. For at least the foregoing reasons, claim 4 is allowable. Thus, claim 7 is allowable for at least the reasons discussed above, and for the additional features recited therein.

Accordingly, Applicant submits that the cited portions of Freadman '942 and Freadman '708, or a proper combination thereof, fail to disclose or render obvious each and every feature of claims 7, 14 and 15. Therefore, Applicant respectfully submits that the rejection under 35 U.S.C. §103(a) of claims 7, 14 and 15 over Freadman '942 in view of Freadman '708 should be withdrawn and the claim be allowed.

Conclusion

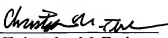
All matters having been addressed and in view of the foregoing, Applicant respectfully requests the entry of this Amendment, the Examiner's reconsideration of this application, and the immediate allowance of all pending claims.

Applicant's representative remains ready to assist the Examiner in any way to facilitate and expedite the prosecution of this matter. If any point remains in issue which the Examiner feels may be best resolved through a personal or telephone interview, please contact the undersigned at the telephone number listed below.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

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